

CNC BAR PULLERS

**EASILY AUTOMATE ANY CNC LATHE
FOR LIGHTS-OUT PRODUCTION**

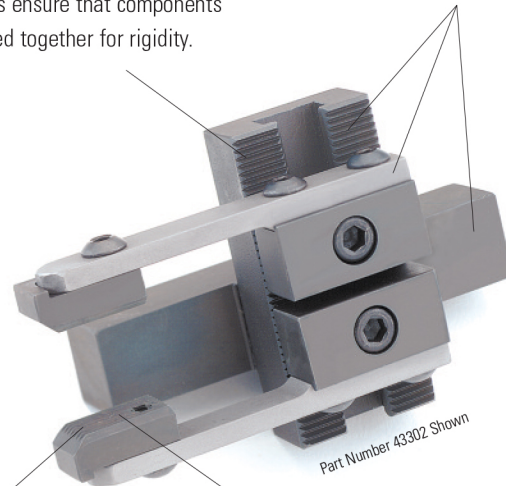
COMPACT CNC BAR PULLERS

Automate Any CNC Lathe

- ❑ Great for use with small CNC lathes — compact design **minimizes tool interference**.
- ❑ Very easy to setup and use.
- ❑ Unit can pull round, square, and hex stock.
- ❑ Flexible heat-treated steel fingers provide strong gripping force.
- ❑ Each compact bar puller includes one set of serrated jaws and one blank spindle bushing.
- ❑ Additional sizes and shank styles are available. Please contact Royal for information.

All parts subject to wear are hardened for strength and durability.

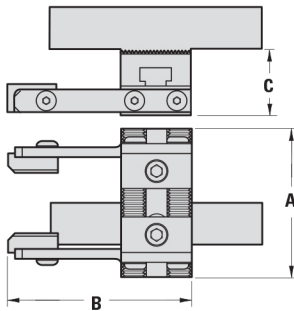
Serrations ensure that components stay locked together for rigidity.



Part Number 43302 Shown

Unit is very easy to use — simply set gap between jaws 1/8" smaller than stock size. As the bar puller slides over the bar along the x-axis, the fingers flex to provide the gripping force. The turret then retracts along the z-axis, pulling the bar out the desired position.

Serrated jaws provide positive grip. Smooth jaws are available for softer materials.



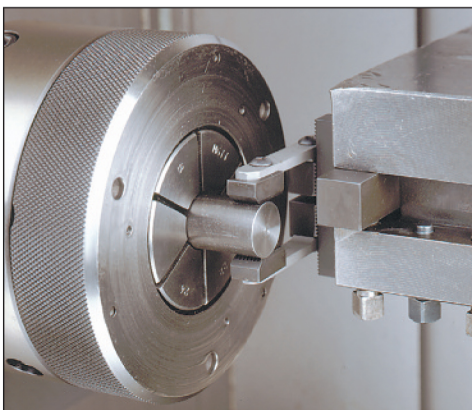
Royal Compact CNC Bar Pullers

SHANK SIZE	GRIPPING RANGE	A	B	C	PART NUMBER
1/2" SQ	1/8" - 1 5/8"	2 1/8"	3 1/4"	1 3/16"	43300
3/4" SQ	1/8" - 2 1/4"	2 5/8"	3 1/4"	1 3/16"	43302
1" SQ	1/8" - 2 1/4"	2 5/8"	3 1/4"	1 3/16"	43304
1" SQ	1/8" - 3"	3 5/8"	3 1/4"	1 3/16"	43306

Royal Compact CNC Bar Pullers (Metric)

SHANK SIZE	GRIPPING RANGE	A	B	C	PART NUMBER
20mm	3-57mm	67mm	83mm	30mm	43680
25mm	3-57mm	67mm	83mm	30mm	43684
25mm	3-76mm	92mm	83mm	30mm	43688

*Includes bar puller, one set of standard jaws and one blank spindle bushing.



Replacement Parts

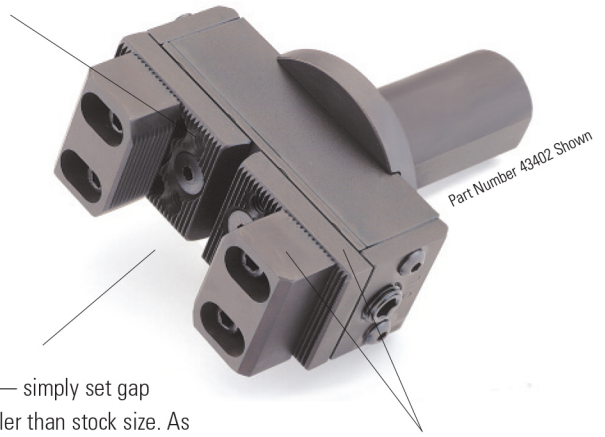
DESCRIPTION	PART NUMBER
Spring Finger Set	43505
Serrated Jaw Set	43500
Smooth Jaw Set	43502

HEAVY-DUTY CNC BAR PULLERS

Automate Any CNC Lathe

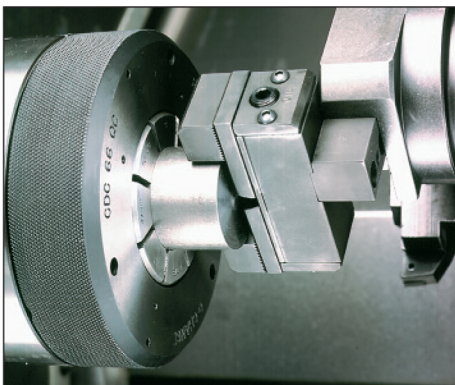
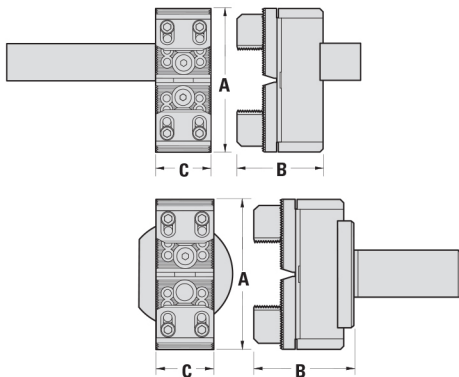
- ❑ Rugged, heavy-duty design withstands the toughest manufacturing environments.
- ❑ Very easy to setup and use.
- ❑ Unit can pull round, square, and hex stock.
- ❑ Large internal die springs provide **very strong gripping force**.
- ❑ Each bar puller includes one set of standard jaws and one blank spindle bushing. Extra capacity jaws sold separately.
- ❑ Additional sizes and shank styles available. Please contact Royal for information.

Serrations ensure that components stay locked together for rigidity.



Unit is very easy to use — simply set gap between jaws 1/8" smaller than stock size. As the bar puller slides over the bar along the x-axis, the jaws compress heavy-duty internal die springs to provide high gripping force. The turret then retracts along the z-axis, pulling the bar out the desired position.

All parts subject to wear are hardened for strength and durability.



Replacement Parts

DESCRIPTION	PART NUMBER
Standard Jaw Set	43510
Extra-Capacity Jaw Set	43512

Royal Heavy Duty CNC Bar Pullers — Square Shank

SHANK SIZE	GRIPPING RANGE		A	B	C	PART NUMBER RIGHT HAND MODEL*
	STANDARD JAWS	EXTRA-CAPACITY JAWS				
3/4" SQ	1/8" - 2 1/4"	1 7/8" - 3 3/4"	3 7/8"	2 9/16"	1 1/2"	43360
1" SQ	1/8" - 2 1/4"	1 7/8" - 3 3/4"	3 7/8"	2 9/16"	1 1/2"	43366
1" SQ	1/8" - 3 1/2"	1 7/8" - 5 3/8"	4 3/4"	2 9/16"	1 1/2"	43370
1" SQ	1/8" - 3 5/8"	1 7/8" - 5 1/2"	5"	2 3/4"	1 3/4"	43372
1" SQ	1/8" - 4 7/8"	1 7/8" - 6 1/2"	6 3/4"	2 3/4"	1 3/4"	43376

* Most machines require a right-hand unit. If you need a left-hand unit please contact one of our engineers at 1-800-645-4174.

Royal Heavy Duty CNC Bar Pullers — Round Shank

SHANK SIZE	GRIPPING RANGE		A	B	C	PART NUMBER
	STANDARD JAWS	EXTRA-CAPACITY JAWS				
1" Dia.	1/8" - 2 1/4"	1 7/8" - 3 3/4"	3 7/8"	2 15/16"	1 1/2"	43400
1 1/4" Dia.	1/8" - 2 1/4"	1 7/8" - 3 3/4"	3 7/8"	2 15/16"	1 1/2"	43402
1 1/4" Dia.	1/8" - 3 1/2"	1 7/8" - 5 3/8"	5 3/8"	2 15/16"	1 1/2"	43404

COMBO CNC BAR PULLERS

Automate Any CNC Lathe

□ The Royal Combo CNC Bar Puller is both a bar puller and a cut-off tool in one unit. Benefits of this design include:

- Saving a turret station.
- **Reduced cycle time** because the turret does not need to index between the cut-off and pulling operations.

- Very easy to setup and use.
- Unit can pull round, square, and hex stock.
- Compact design enables it to be used on most CNC lathes.
- Each Combo Bar Puller includes one set of standard jaws and one blank spindle bushing. Order cut-off insert and holder separately.



Proudly
Made
in U.S.A.

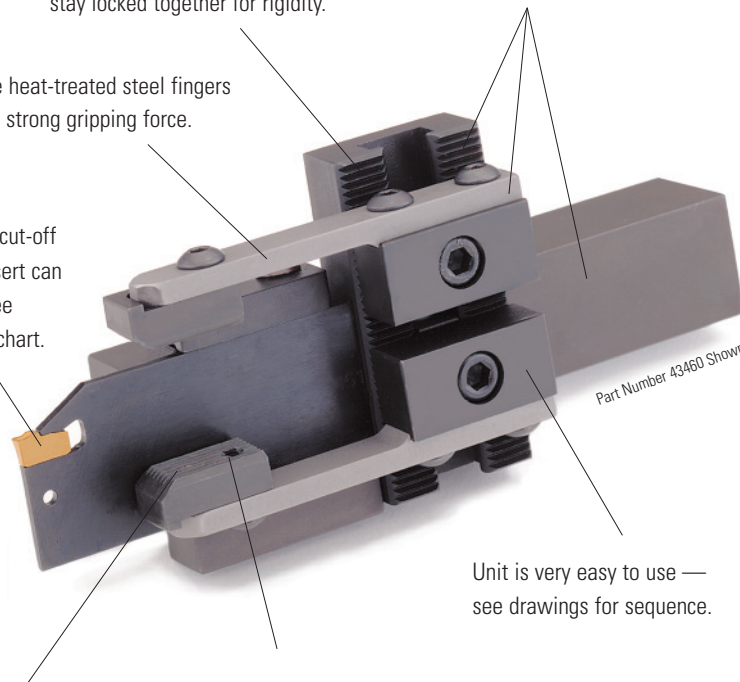
Serrated jaws provide positive grip. Smooth jaws are available for softer materials.

Any standard cut-off holder and insert can be used — see compatibility chart.

Flexible heat-treated steel fingers provide strong gripping force.

Serrations ensure that components stay locked together for rigidity.

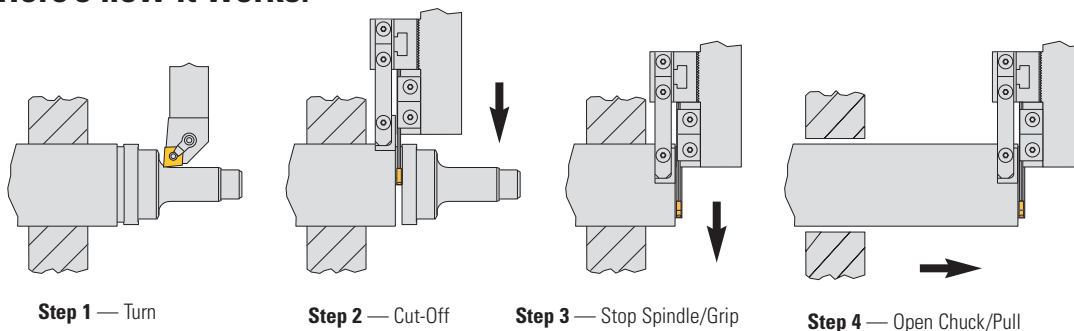
All parts subject to wear are hardened for strength and durability.



Unit is very easy to use — see drawings for sequence.

This unique **two-in-one design** is both a bar puller and a cut-off tool. Advantages include saving a turret station and reducing cycle time.

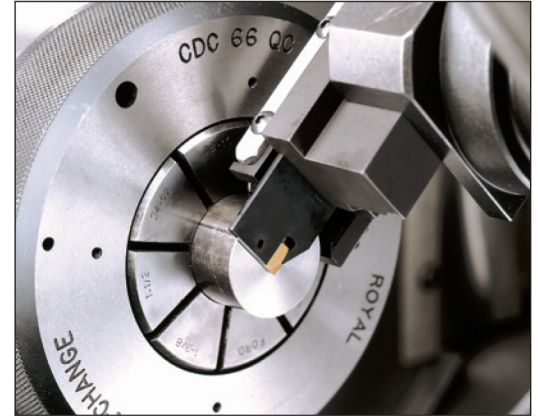
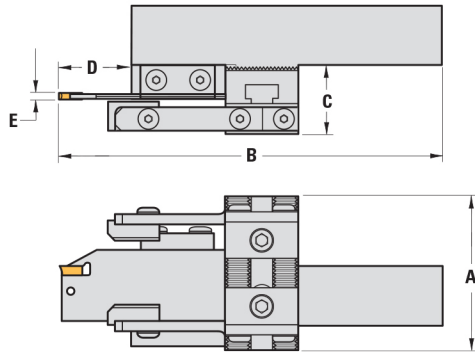
Here's how it works:



Check out the Royal Bar Puller Video
at www.barpullers.com

COMBO CNC BAR PULLERS

Automate Any CNC Lathe



Cycle times are reduced because the turret does not need to index between cut-off and pulling operations.

Part Number 43460 Shown.

Please note dimension D (maximum depth of cut). If a greater depth of cut is required, we suggest using a separate cut-off tool and only using the bar puller for the pulling operation.

Royal Combo CNC Bar Pullers

SHANK SIZE	GRIPPING RANGE	A	B	C	MAX DEPTH OF CUT D ¹	E	PART NUMBER RIGHT HAND ² MODEL
1/2" SQ	1/8" - 1 5/8"	2 1/8"	4 11/16"	1 3/16"	7/8"	0.125"	43452
3/4" SQ	1/8" - 2 1/4"	2 5/8"	4 3/4"	1 3/16"	7/8"	0.125"	43456
1" SQ	1/8" - 2 1/4"	2 5/8"	6 3/8"	1 3/16"	1 1/4"	0.125"	43460
1" SQ	1/8" - 3"	3 5/8"	6 3/8"	1 3/16"	1 1/4"	0.125"	43464
1" SQ	1/8" - 4"	3 5/8"	6 3/8"	1 3/16"	1 1/4"	0.125"	43468

- Cut-off holder and insert can be purchased separately from Royal Products or through your tooling supplier.
- Bar puller accepts many popular brands of holders and inserts (see chart).
- Cut-off holders not purchased from Royal must be slightly modified before being used with bar puller.

Royal Combo CNC Bar Pullers (Metric)

SHANK SIZE	GRIPPING RANGE	A	B	C	MAX DEPTH OF CUT D ¹	E	PART NUMBER RIGHT HAND ² MODEL
20mm	3-57mm	67mm	121mm	30mm	22mm	3mm	43615
25mm	3-57mm	67mm	162mm	30mm	32mm	3mm	43625
25mm	3-76mm	92mm	162mm	30mm	32mm	3mm	43635

¹Maximum depth of cut.

²Most machines require a right-hand unit. If you need a left hand unit please contact one of our engineers at 1-800-645-4174.

³Includes bar puller, one set of standard jaws and one blank spindle bushing. Order insert holder and insert separately.

Holder with Insert

BAR PULLER SHANK SIZE	PART NUMBER
1/2" or 3/4"	43520
1"	43522



³Includes one modified holder, one neutral cut-off insert, and one installation / removal tool. Royal supplies Kennametal insert GSP125N.

Replacement Parts — Combo Model

DESCRIPTION	PART NUMBER
Spring Finger Set	43505
Serrated Jaw Set	43500
Smooth Jaw Set	43502

Compatibility Chart

BRAND	1/2", 3/4" AND 20mm SHANK	1" AND 25mm SHANK
Carbology	150.10-20-3	150.10-25-3
Iscar	SGFH26-3	SGFH32-3
Kennametal	DSB4-340-105	DSB5-340-110
Manchester	340-105	340-110
Sandvik	151.2-21-30	151.2-25-30
Valenite	VH101 26 3	VH101 32 3

GRIPPEX 20L COOLANT-ACTUATED BAR PULLERS — Automate Any CNC Lathe



Can be operated by either coolant or compressed air.

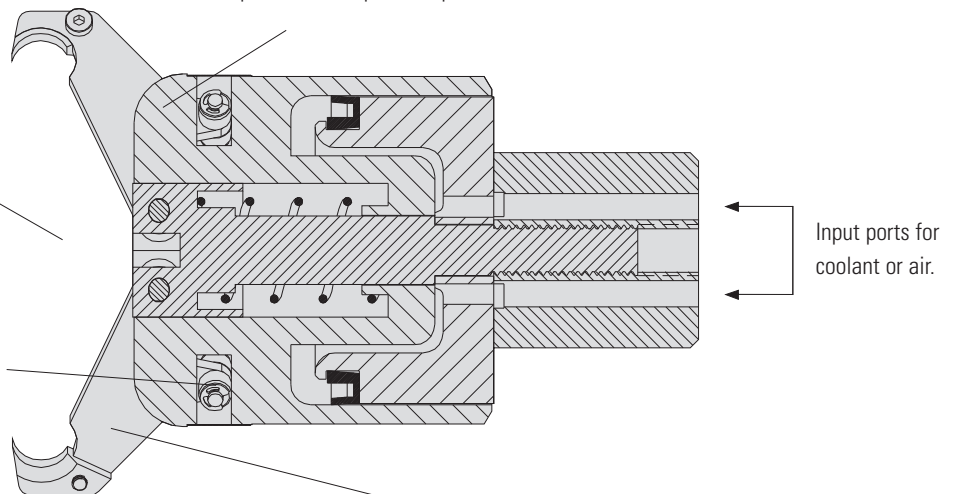
- The patented Grippex 20L CNC bar puller is actuated by a CNC lathe's coolant system. As coolant is fed through the unit, it pushes a piston forward which causes the fingers to close around the bar stock. When the coolant is turned off, the fingers automatically spring open.
- Self-adjusting mechanism — fingers will close down until they contact the bar stock so no presetting is necessary. This feature allows the Grippex to **make multiple pulls on the same workpiece**, even after the OD has been turned.
- Unit can also be operated by air pressure.
- When fitted with robot gripper jaws, the Grippex can:
 - Remove a bar remnant from a bar-fed lathe and drop it into the parts catcher. This eliminates the risk of the remnant falling into the chip conveyor where it can become jammed and cause damage.
 - Remove a finished workpiece from a sub-spindle and place it into the parts catcher. This eliminates the need for unreliable ejectors and also **allows the sub-spindle to swallow longer parts**.

The Grippex has a wide gripping range of 1/8" – 3 1/8". Higher capacity gripping fingers are also available.

Very high gripping force and smooth operation is achieved through a **patented finger mechanism** that pivots on two roller bearings. As little as 15 psi of coolant pressure is enough to enable the Grippex to pull a 210 lb. bar!

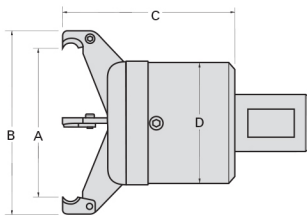
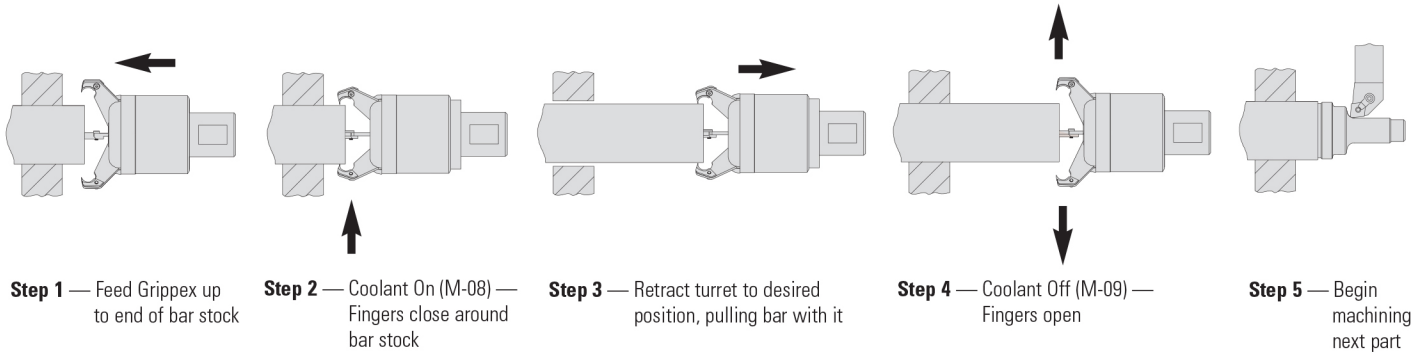
Hardened finger inserts reduce wear and help the Grippex penetrate hard materials like stainless steel.

Thick-walled heavy-duty construction helps to protect unit and allows it to be used at coolant pressures of up to 280 psi.



Three-finger design is superior for gripping both round and hex stock. Special two-finger model also available. Contact Royal for information.

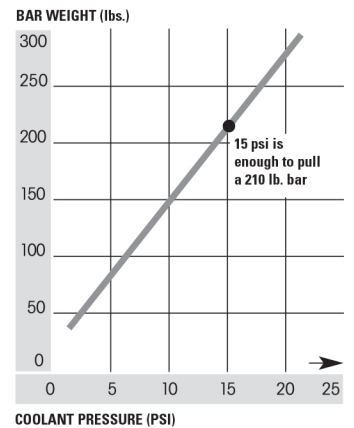
GRIPPEX 20L COOLANT-ACTUATED BAR PULLERS — Automate Any CNC Lathe



20L Clearance Dimensions

GRIPPING RANGE	FINGER PART NUMBER	A	B	C	D
1/8" - 2 3/8"	43170	2 3/8"	3 1/4"	3 1/2"	2 11/16"
1/8" - 3 1/8"	43175	3 1/8"	4"	3 11/16"	2 11/16"
5/16" - 4 1/8"	43180	4 1/8"	5 1/16"	4 1/4"	2 11/16"

Grippex 20L Pulling Force Graph



Grippex — 20L Bar Pullers



SHANK	PART NUMBER
1" Round	43140
1 1/4" Round	43145
1 1/2" Round	43150

*Includes one set of standard fingers (3/4" cap), and one set of inserts.

Coolant Adapter

Provides an easy method for feeding coolant or air to unit. Not necessary for most applications.



DESCRIPTION	PART NUMBER
Coolant Adapter	43190

Replacement Finger Sets



CAPACITY	PART NUMBER
1/8" - 2 3/8"	43170
1/8" - 3 1/8" (Std.)	43175
5/16" - 4 1/8"	43180

Contact us if you need fingers for an older model Grippex unit.

Replacement Insert Sets



DESCRIPTION	PART NUMBER
20L Insert Set	43185

Robot Gripper Jaw Sets

For removing finished parts from a subspindle or removing bar remnants from main spindle.



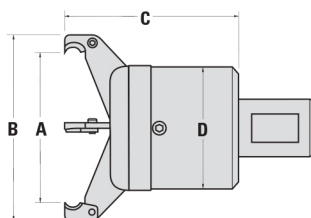
DESCRIPTION	PART NUMBER
20L Robot Gripper Jaw Set	43106

GRIPPEX 20S COOLANT-ACTUATED BAR PULLERS — Automate Any CNC Lathe

- Same great features as Model 20L featured on previous pages.
- **Smaller body diameter** enables 20S units to be used on machines with less tool clearance and smaller turrets.
- Gripping force for 20S is quite high, but not as high as the 20L models (see chart).
- 140 psi maximum coolant pressure.



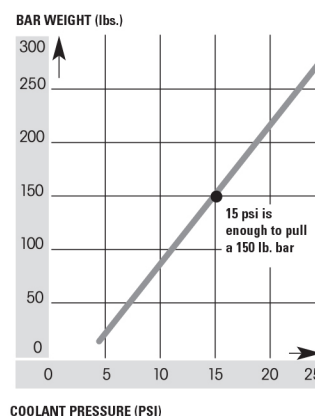
U.S. Patent
#6,530,578



20S Clearance Dimensions

GRIPPING RANGE	A	B	C	D
1/8" - 2 1/16"	2 1/16"	2 15/16"	3 3/8"	2 3/8"

Grippex 20S Pulling Force Graph



Grippex 20S Bar Pullers

SHANK	PART NUMBER
1"	43340
1 1/4"	43345



Grippex 20S Replacement Finger Sets

CAPACITY	PART NUMBER
1/8" - 2 1/16"	43339



Coolant Adapter

Provides an easy method for feeding coolant or air to unit. Not necessary for most applications.

DESCRIPTION	PART NUMBER
Coolant Adapter	43190



Grippex 20S Replacement Insert Sets

CAPACITY	PART NUMBER
20S Insert Set	43185